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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,301	02/08/2002	Eiji Hamamoto	020588	1113
38834	7590	02/09/2004	EXAMINER	
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036			HON, SOW FUN	
			ART UNIT	PAPER NUMBER
			1772	

DATE MAILED: 02/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

10/071,301

Applicant(s)

HAMAMOTO ET AL. 

Examiner

Sow-Fun Hon

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**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 12 January 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY [check either a) or b)]**

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attachment to advisory action.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: None.Claim(s) objected to: None.Claim(s) rejected: 1-14.Claim(s) withdrawn from consideration: None.

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☒ Other: Attachment to advisory action

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*Advisory Action*

1. The request for reconsideration filed 01/12/04 has been considered but does not place the application in condition for allowance for the reasons set forth below.

2. Applicant argues that boric acid migrates within an iodine-stained PVA layer, but is not substantially (mobile) in a set or hardened adhesive layer, and that as a result, boric acid cannot migrate from the PVA polarizer film to PVA in the adhesive layer of Hopper.

Applicant is respectfully apprised that the adhesive layer of Hopper is dispersible in water ('375, column 6, lines 1-10) which means that it is hydrophilic. Thus the water dispersible adhesive layer which comprises hydrophilic polyvinyl alcohol would pick up both water soluble iodine (bath) and water soluble boric acid (aqueous solution) when the laminate is run through both ('375, column 6, lines 5-15).

3. Applicant argues that even if the interpretation set forth in the Office Action were true, the comparative example 1 on page 9 of Applicant's specification would show adhesion for the PVA adhesive because of cross-linking due to migrated boric acid, and that on the contrary, adhesion through the PVA adhesive layer is insufficient with peeling occurring as demonstrated in Table 1 of Applicant's specification.

Applicant is respectfully apprised that the PVA layer is not just run through, but actually cross-linked in a heated bath containing the boric acid cross-linking agent first, then dried before application of the adhesive (Specification, page 8, lines 25-35). Thus if the aqueous solution of polyvinyl alcohol adhesive did not contain a cross-linking agent, the amount of migration of unused crosslinking agent from the crosslinked PVA layer would be very slow and thus minimal.

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On the other hand, in the process of Hopper, the PVA layer is coated with the adhesive first, and the laminate is formed before running the laminate through an iodine bath and then a bath (aqueous solution) containing boric acid ('375, column 6, lines 5-15). Hopper teaches that the polyvinyl alcohol film portion of the laminate is stained by iodine and cross-linked (stabilized) by the boric acid treatment. The treated film is then subjected to infrared and ultraviolet light irradiation to substantially increase its hydrolytic stability over time ('375, column 6, lines 15-20), meaning that it is further cross-linked in order to substantially increase its hydrolytic stability over time.

4. Applicant argues that if the boric acid provided for a cross-linking treatment was made available at the side of the adhesive layer on the PVA film, the boric acid exposed from the PVA film would enable adhesion to the transparent protective film without the use of an adhesive, and that on the contrary, like the present invention, Hopper used an adhesive layer.

Applicant is respectfully apprised that an adhesive has very low viscosity in order to be able to fill the nooks and crannies on the surfaces of both layers that are being adhered together. This provides an interlocking mechanism which is an essential component of a strong adhesive bond. The PVA polarizing layer has to have structural integrity after it has been stretched, just like the protective layer it is being adhered to. Thus a separate adhesive comprising an aqueous solution of the PVA is much more effective as is well known in the art, recognized by both Hopper and Applicant.

5. Applicant argues that it is commonly known that the cross-linking reaction of the boric acid is completed in the drying step, so that boric acid cannot migrate from the PVA film to the adhesive after completion of the cross-linking reaction.

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Again, Applicant is respectfully reminded that Hopper does not run the PVA polarizing film through the boric acid bath till after application of the adhesive and the formation of the laminate. Thus the PVA in the adhesive does pick up the boric acid like the PVA polarizing layer, so that both are cross-linked.

6. Applicant argues that Buzzell only discloses using a cross-linking agent with the PVA polarizing layer, but not in the adhesive, and that it is not obvious to modify Buzzell to use a cross-linking agent in the adhesive as well as in the polarizing layer.

Applicant is respectfully directed to the paragraphs above which discuss Hopper. Hopper is evidence that it is obvious to modify Buzzell to use a cross-linking agent in the adhesive as well as in the polarizing layer.

7. Applicant argues that Buzzell teaches that the cross-linking agent, while increasing the stability of the cross-linking agent may have a detrimental effect to the optical properties, and thus would not motivate one of ordinary skill in the art to modify the adhesive.

Applicant is respectfully apprised that the adhesive layer of Buzzell is a very thin one, not even visible, since it comprises a 1-2 % solution of polyvinyl alcohol ('351, column 4, lines 30-40). The hydrolytic stability of the polyvinyl alcohol is motivation enough for the introduction of a cross-linking agent.

8. Applicant is also respectfully reminded that even though product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re*

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*Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985).* Therefore, although the process by which the cross-linking agent is introduced into the adhesive in the invention of Hopper is different from the process by which the cross-linking agent is introduced into the adhesive in the present application, it still ends up in the adhesive.


Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (571)272-1492. The examiner can normally be reached Monday to Friday from 9:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sow-Fun Hon

02/02/04

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772

2/3/04